

BATEMAN & COMPANIES, Inc.

347 Madison Avenue, New York City

District Sales Headquarters:

New York; Greenwich, N. J.; Worcester, Mass.,
and Chicopee Falls, Mass.

Specialists in the Manufacture of
Fertilizing Machinery, Lime Sowers,
Planters and Riding Cultivators
with Fertilizing Attachments,
Curtis "Easy Pull" Manure Spreaders

Also Manufacturers of

IRON AGE Cultivators, Potato
Machinery, Sprayers, Planters,
Garden Tools, etc.; CHICOPEE
LINE Plows, Corn Huskers and Small
Farm Implements; WILKINSON
Plows, Scrapers, Wheelbarrows, etc.;
CLARK Cutaway Harrows; WOR-
CESTER-BUCKEYE Mowers;
ACME Pulverizing Harrows, etc., etc.

Form No. A11—Nov. '20.

Lime and Fertilizer Sowers





DUANE H. NASH, INC.

McWhorter

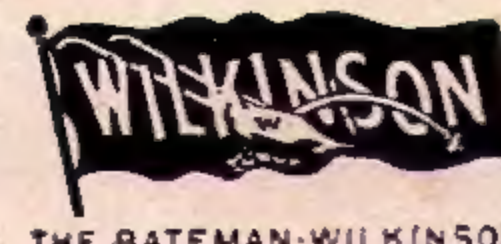
McWHORTER MFG. CO.

Clark
"CUTAWAY"

THE CUTAWAY HARROW CO.

IRON AGE

BATEMAN MANUFACTURING CO.

The
Chicopee LineBELCHER AND TAYLOR
AGRICULTURAL TOOL CO.WORCESTER LINE
THE RICHARDSON MFG. CO.THE BATEMAN-WILKINSON
COMPANY LTD.

A Complete Line of Fertilizing Machinery

IN gathering into one catalogue the various lines of Fertilizer Distributors made by the manufacturers who have combined to form Bateman and Companies, Inc., we find a complete line of fertilizing machinery, from the small hand-pushed garden tool up to very large broadcasting machines. We find machines that drill the fertilizer direct into the rows, attachments for riding cultivators that side-dress while the crop is being cultivated, machines that broadcast either commercial fertilizers or lime, and the easiest-working, most practical manure spreader made in America. In some few instances, where there were two different machines made for the same purpose, the best has been retained and the other discarded.

No other company offers such a broad array of fertilizing machinery—an example of the advantage gained by consolidating a number of manufacturers who have heretofore specialized on a few certain lines.

We hope you will give this booklet a careful reading, and feel sure you will find in it some good money-making suggestions related to the more advanced methods of fertilizer distribution. If there is any further information you may desire we should be very glad to have you write us. Your letter will be taken care of by men thoroughly experienced in the work, and in practical farming operations.

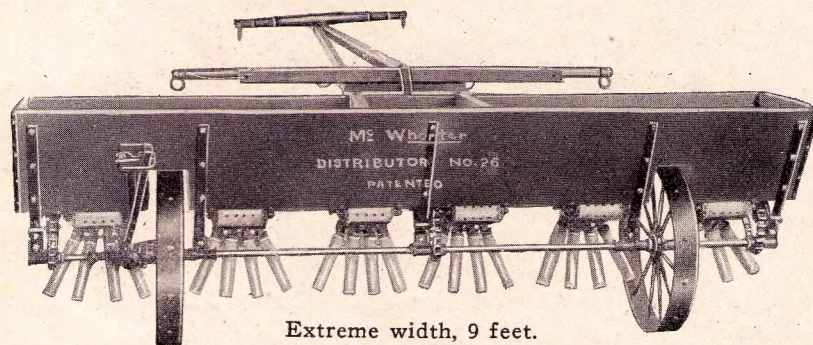
Bateman and Companies, Inc.

347 Madison Avenue

New York City

McWhorter Fertilizer Distributors

MCWHORTER Fertilizer Distributors have stood in the highest regard in the principal trucking and gardening sections of the country for many years, and are noted for the common-sense features that appeal to every man interested in fast, economical and easy fertilizer distribution.



Extreme width, 9 feet.
Hopper capacity about 540 lbs.
Shipping weight, 373 lbs.

No. 26. Set for broadcasting nine feet wide.

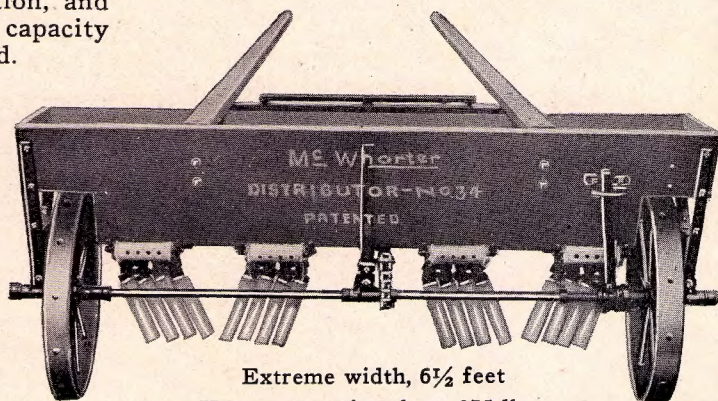
times happens when dribbled or pushed through a hole. It keeps the fertilizer finely divided, assuring more thorough distribution.

The *Adjustable Spouts* are made of rubber, eliminating breakage, bending or rusting in that very important part of the distributor.

The *Low-Down* construction of the Nos. 13-C, 26, 34 and 44 shown herein has been a great success and is very popular. This feature brings the distribution much nearer the ground and under better control as to wind condition, and makes the hoppers far easier to fill. The capacity of the hoppers is considerably increased.

The No. 26 shown here is a *low-down* type two-horse machine, broadcasting a width of nine feet. The low-down feature with the wheels entirely out of the way make it especially well adapted to fertilizing orchards and groves. It has the indispensable Belt Feed feature. By means of the adjustable spouts, it will also fertilize any number of furrows or rows that come within the width of the machine. Constructed of the very best materials throughout and by skilled, careful workmen.

Standing out prominently among the many features of this machine is the **McWHORTER BELT FORCE FEED**. This method carries the fertilizer through adjustable outlets by means of belts. Each belt (plainly seen in the illustrations) discharges the fertilizer in a wide, thin stream or sheet from which it flows into adjustable iron and rubber distribution spouts. It is easily understood that this method avoids any chance of damp fertilizer diminishing the outlets and reducing the supply, as some-



Extreme width, 6½ feet
Hopper capacity about 375 lbs.
Shipping weight, 160 lbs.

No. 34. Set for fertilizing three rows 2 feet 9 inches apart.

McWhorter Fertilizer Distributors—Continued

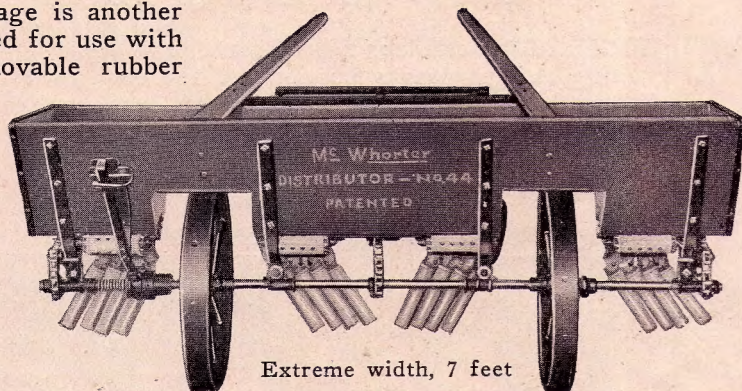
The No. 34 shown on preceding page is another *low-down* type machine, but is intended for use with one horse. The four feeds and movable rubber spouts make it a complete broadcaster to the extent of six and a half feet. It will fertilize three furrows if not over two feet nine inches apart, and will distribute in two furrows from that up to five feet six inches, the spouts being adjustable to suit the different kinds of work. It will side-dress on the sides of two rows of growing crops. It will also side-dress one side of two or three rows. In it are embodied the McWhorter Belt Force Feed and rubber spouts, and the wheels are entirely out of the way. The best of materials are used throughout and the workmanship is excellent.

The No. 44 is a *low-down* distributor similar to No. 34, but has wheels movable sideways, allowing any work the machine can do to be accomplished without destroying the furrow. The wheels are adjustable so that they either run in the center of the furrow or far enough out not to damage it. It will fertilize at one time three furrows up to three feet apart, and two furrows from that up to six feet apart. It will side-dress on both sides of two rows of growing crops. It will also side-dress one side of two or three rows, and can be adjusted to broadcast seven feet wide. A great variety of work can be done with this machine. It broadcasts lime in the most approved and efficient way.

The No. 13-C is a *low-down* distributor for three-row furrow work (does not broadcast) and has already become highly popular in sections where known.

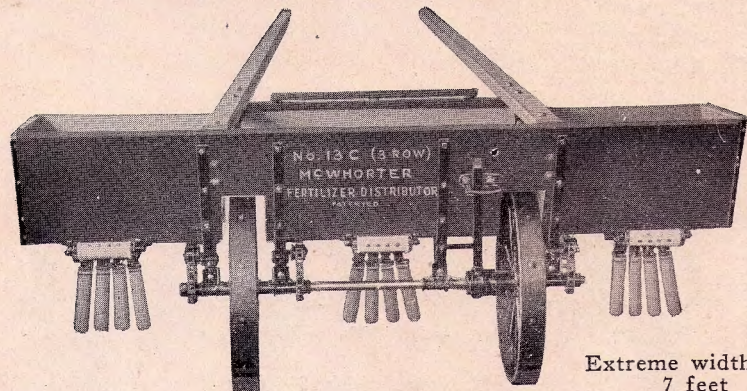
It has considerable range as to width of rows by means of the adjustable spouts. With rows about two feet nine inches to three feet, it sows to the very best advantage because the feeds are directly over the furrows. It also side-dresses three rows of growing crops.

The No. 13-D is very similar to the 13-C, but has three wide belts, instead of the narrow belts shown on the 13-C. The 13-D has six adjustable rubber spouts to each belt, and can be used as a broadcaster as well as for row work. It will fertilize three rows from 2 feet 6 inches to 3 feet 3 inches apart, or will broadcast seven feet wide.



Extreme width, 7 feet
 Hopper capacity about 400 lbs.
 Shipping weight, 266 lbs.

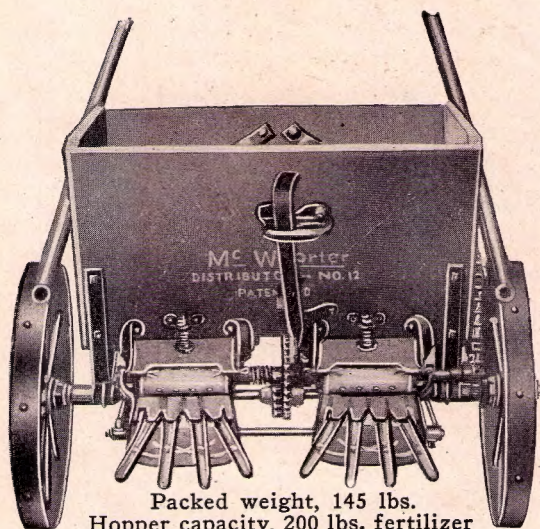
No. 44. Set for fertilizing three rows 3 feet apart



Hopper capacity about 400 lbs.
 Shipping weight, 260 lbs.

No. 13-C (3-Row) For row work only.

No. 12 McWhorter One-Horse Fertilizer Distributor



Packed weight, 145 lbs.
Hopper capacity, 200 lbs. fertilizer

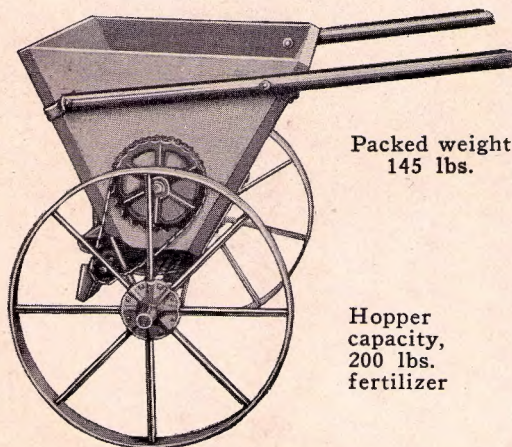
THIS distributor has the *Belt Feed* and adjustable spout advantage, same as the other McWhorter Distributors shown in this booklet, but is intermediate in size, capacity and price between the small No. 21 hand machine and the larger No. 34. By means of the *Belt Feed* the fertilizer is brought out of the hopper in wide streams and further regulated to the different ways it can be applied by means of adjustable spouts.

It will be noted this implement is furnished with shafts, a new feature in distributors of this kind. These keep the machine very steady while running, and do away with the necessity of having handles by which to guide it, leaving the hands of the operator perfectly free for driving. This improvement alone should recommend it very highly.

The work performed is exactly the same as that of our Hand Distributor. It puts the fertilizer down in a row as narrow as four inches, and from that any width up to thirty inches, making a uniform and efficient spread on any row or bed. The fertilizer can also be divided from one into two, three or four streams and thus be applied beside or on those numbers of rows or plants at one passing of the machine. These features make our distributors the best kind of top-dressers, and wherever they have been used they have made this manner of applying fertilizer or lime very strongly favored. For top-dressing strawberries alone it is worth the price asked, as it gives even distribution on any bed up to 2½ feet wide. Can be regulated to sow any quantity from 200 pounds to one ton per acre.

No. 11 McWhorter One-Horse Fertilizer Distributor

THE No. 11 is constructed on the same general lines as No. 12, but is lower in price. It has shafts and a hopper with 200 pounds capacity, same as No. 12, but only one feed belt and set of spouts. It will spread the fertilizer in the furrow from 3 to 15 inches wide, but we strongly recommend the wider spread of 12 to 15 inches, because when the furrow is turned in, the fertilizer is thoroughly mixed with the soil. Can be regulated to sow any quantity from 200 pounds to a ton per acre.



Packed weight
145 lbs.

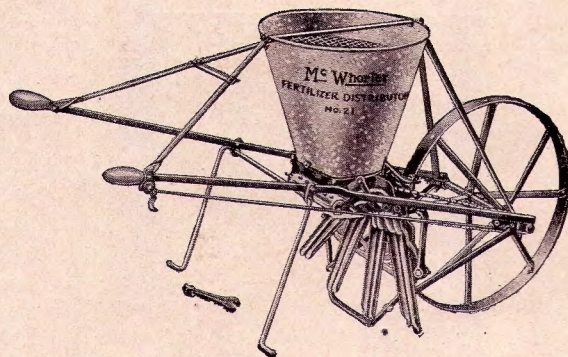
Hopper
capacity,
200 lbs.
fertilizer

No. 21 McWhorter Hand Fertilizer Distributor

THIS is a hand machine particularly adapted to the needs of the truck and market gardener, and for sowing either fertilizer or lime on park grounds, golf courses, lawns, etc. It is so designed that the fertilizer can be applied in any manner desired—in the furrow, beside the growing crop, as a top dressing, or broadcast to a width of 30 inches. The operator has perfect control of the spread and division of the same, any change for that purpose being made without removing or adding any part or loosening a bolt, and requiring only a few seconds.

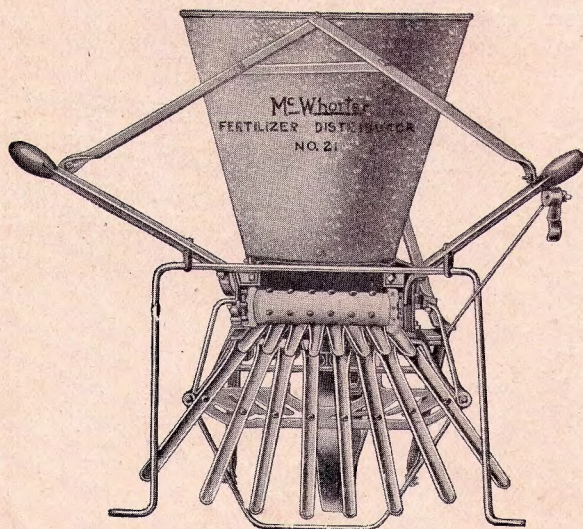
This machine has the same positive belt feed as used on the larger McWhorter distributors. The belt is a real force-feed, constituting a moving bottom to the hopper carrying out the loose fertilizer as it settles down upon it without any friction or tendency to gather when a little wet. Sows any quantity from a few pounds up to forty or more to the hundred yards of row, or from 200 pounds to over a ton per acre.

The fertilizer can be instantly divided from one into two or more streams, and thus be applied either beside or on two or more rows of plants at the same time. This is done by opening and closing fan-like spouts or channels through which the fertilizer passes to the ground.



No. 21

Capacity 80 lbs.
Extreme width, 30 inches
Shipping weight, 85 lbs.



Special attention is called to this ability to *spread* the fertilizer with this machine. This is an important matter which will be appreciated by the farmer experienced with the highly concentrated fertilizer of to-day. Experience has proved conclusively that these commercial fertilizers must be well spread and incorporated with the soil to avoid retarding the early growth and maturity of all vegetable crops by the action of the powerful fertilizers on the roots of the plants.

No. 21 McWhorter Hand Fertilizer Distributor—Continued



This distributor offers means of controlling the spread fully. It is light, but strong and rigid. Easily handled by any man or boy. All parts except the belt are of metal, well braced, and will last a lifetime.

The following table will be found very useful:

NUMBER OF POUNDS REQUIRED PER ACRE WHEN
ROWS ARE FOLLOWING DISTANCES APART:

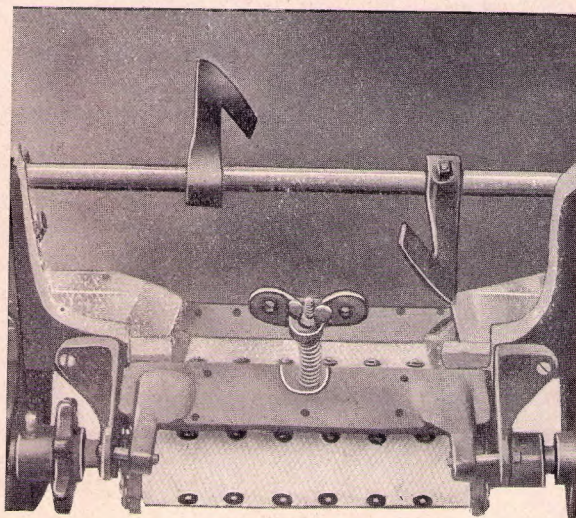
No. lbs. per 100 Yards of Row	18 in.	2 ft.	2½ ft.	2¾ ft.	3 ft.	3½ ft.	4 ft.	4½ ft.	5 ft.
10	980	735	590	530	490	420	370	325	295
15	1470	1100	880	800	735	630	550	490	440
20	1960	1470	1175	1065	980	820	735	655	590
25	2450	1840	1470	1330	1225	1050	920	815	735
30	2940	2205	1765	1595	1470	1260	1105	980	880
35	3430	2575	2060	1865	1715	1470	1285	1145	1030
40	3920	2940	2350	2130	1960	1680	1470	1305	1175

How the McWhorter Force Feed Belt Operates

THE McWhorter Force Feed Belt is plainly shown in the sectional view of the fertilizer hopper. This belt carries the fertilizer, *in a broad, thin sheet*, under the adjustable gate in front, at which point the fertilizer drops to the ground through the rubber distribution spouts.

The amount of fertilizer permitted to pass through the gate is regulated by a very exact and simple thumbscrew adjustment. Here is a feed that is at all times positive, in that it cannot be clogged, the belt being a revolving bottom to the hopper, too wide to permit damp fertilizer to bridge over it. No lumps can pass beneath the gate to clog up the spouts. The rivets on the belt act as drags, cutting and grinding the lumps into fine powder.

The belt is of heavy canvas, reinforced with steel cross bars attached to sprocket chains on each side. The canvas is firmly riveted to this framework. All parts of the machine that come in contact with fertilizer are easily accessible for cleaning.

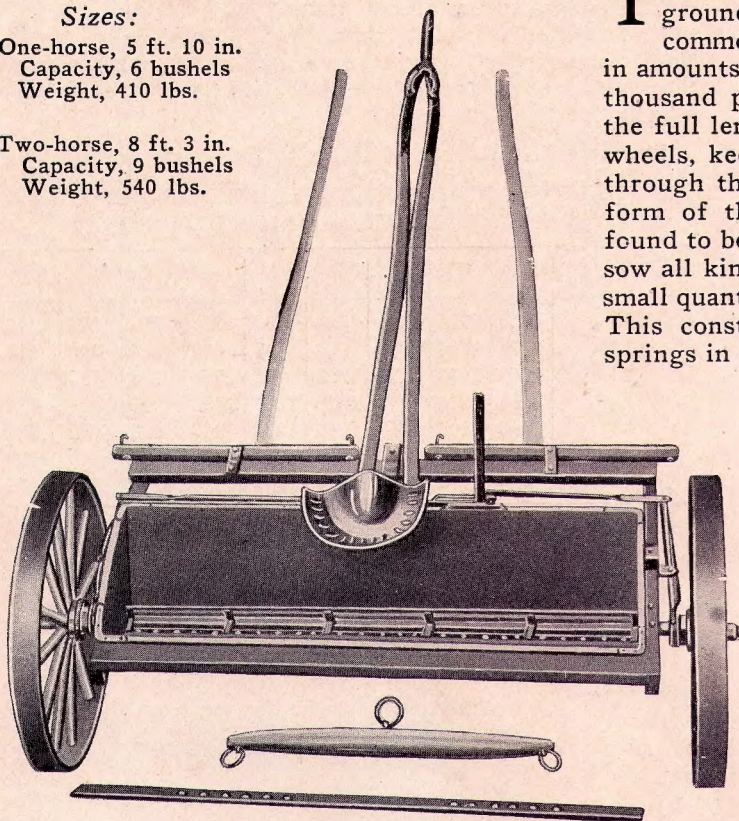


Stevens Broadcast Fertilizer Sower

Sizes:

One-horse, 5 ft. 10 in.
Capacity, 6 bushels
Weight, 410 lbs.

Two-horse, 8 ft. 3 in.
Capacity, 9 bushels
Weight, 540 lbs.



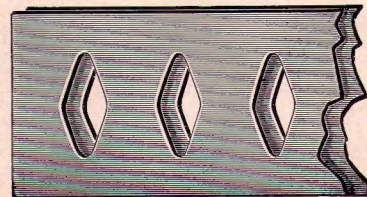
inches, with 4-inch tires. The hopper is low-down, for easy filling. Machine is thrown in and out of gear by foot lever operated from the seat, but ratchet hubs permit turning while in motion without throwing machine out of gear.

A Row Plate for distributing in rows is sent with both sizes of machines without additional charge. At small cost a third plate can be obtained which is used to advantage when sowing small quantities. The latter can also be used to shut off the fertilizer at any time without making changes in adjustment.

Combined shafts with pole iron forming a pole as shown in cut is sent with each Stevens Broadcast Sower, together with whiffletrees and neckyoke. We can furnish a solid pole with neckyoke, evener and whiffletrees in place of combined pole when desired.

THIS well-known Sower distributes lime, ashes, ground rock phosphate, nitrate of soda, and commercial fertilizers evenly over the surface in amounts adjustable from one hundred to several thousand pounds per acre. A long reel running the full length of the hopper and operated by the wheels, keeps the fertilizer in motion, forcing it through the openings in the bottom plates. The form of the aperture is patented and has been found to be the only pattern that will successfully sow all kinds of commercial fertilizers in large or small quantities (see sectional cut of bottom plate). This construction does away with all gears or springs in the box, making the machine strong and durable. An adjustable plate, operated by a lever at the driver's side, gauges width of the openings. Land gauges are placed on the front of the box to regulate quantity of fertilizer sown to the acre. This gauge indicates an approximate amount of from 500 pounds to 6 or 8 tons.

The hopper is of good capacity, made of one-piece boards, and is strongly supported in a heavy frame carried by a solid, square $1\frac{1}{4}$ " axle. Covered hoppers can be furnished at a small additional cost—a good feature, especially for windy days. The wheels are forty

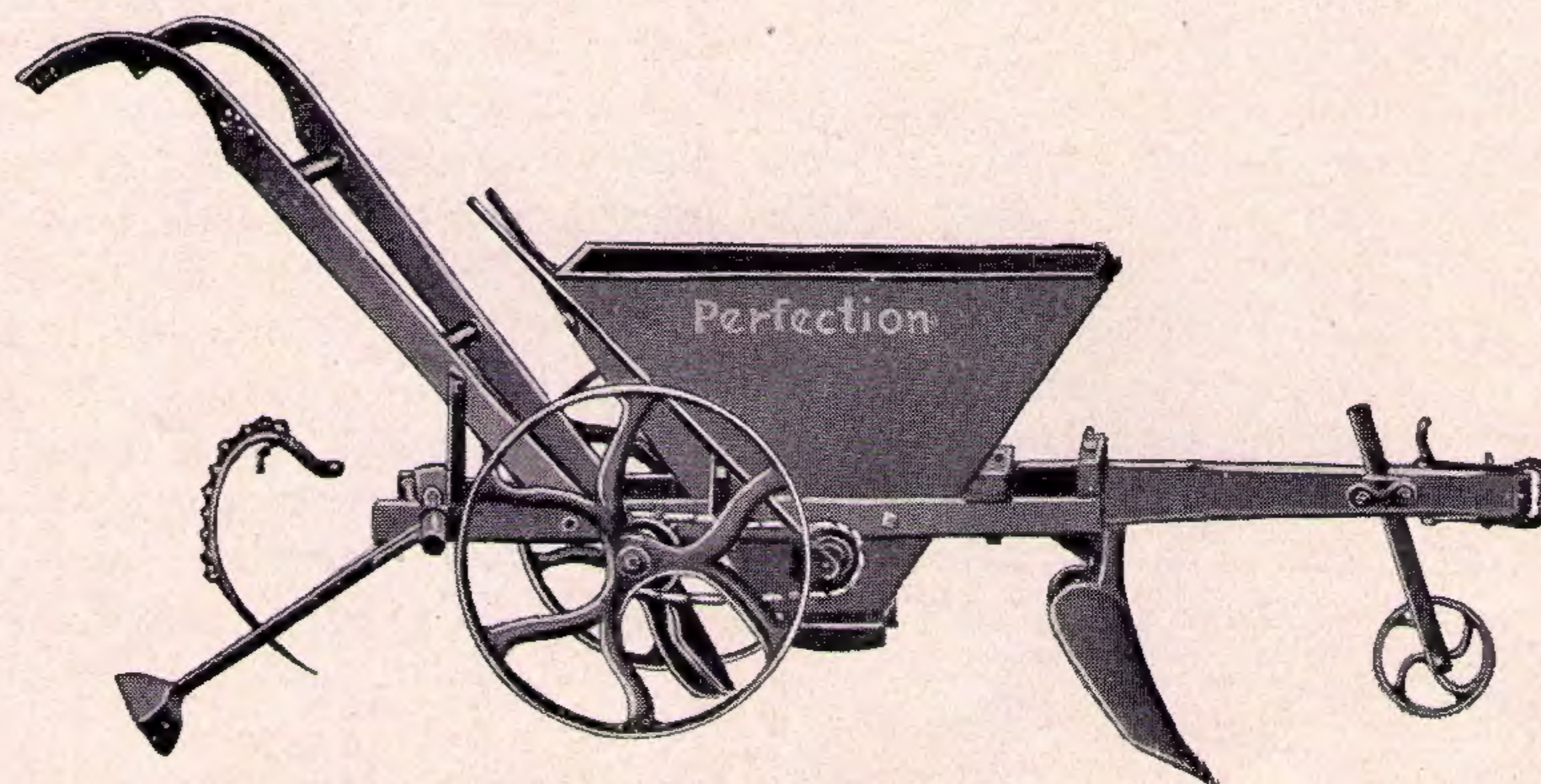


Openings in bottom plates

Perfection Drill and Fertilizer Sower

THIS handy machine will form a drill from three to ten inches deep, drop into the drill any commercial fertilizer at the rate of 100 to 3000 pounds per acre, and cover fertilizer as desired. The depth, the quantity sown, and the covering blades can all be adjusted as desired. If the fertilizer is to be mixed into the soil, the tooth shown in rear of the machine can be used. The Fertilizer Agitating Cylinder in the hopper is driven by both wheels. The gears are protected from dirt by a shield around them on the under sides.

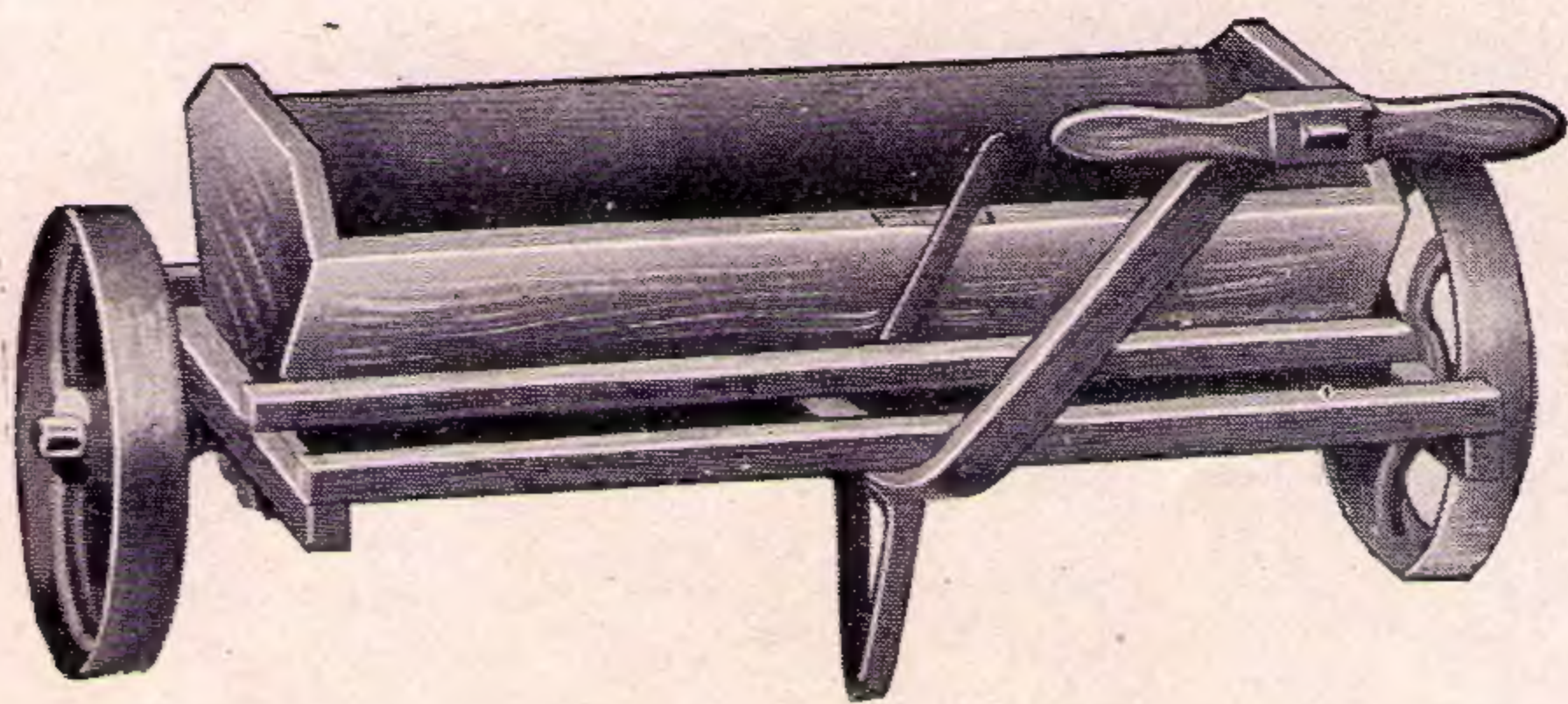
The fertilizer sowing device is the same as used on the Stevens Broadcast Sower shown on page 7, and has proved to be superior to every other for this type of work.



Weight, 140 lbs.

Stevens Hand Fertilizer Sower

BEAUTIFUL lawns can be obtained only by an even distribution of fertilizer. The Stevens Hand Fertilizer Sower will sow perfectly all kinds of lawn dressing and commercial fertilizers, wood ashes, lime, etc. It can be regulated to sow in large or small quantities as desired. It will fertilize strawberry beds and do other garden and field work.



Stevens Hand Fertilizer Sower

This fertilizer sowing device is of the same type as the Stevens Broadcast Fertilizer Sower described on page 7. The hopper is 34 inches long and holds 1½ bushels. Weight of machine, 83 pounds. It is well constructed and nicely painted.

This machine is sold at a very attractive price, and because of the saving of time and labor, it will encourage the development of healthy, beautiful lawns through the use of fertilizers.

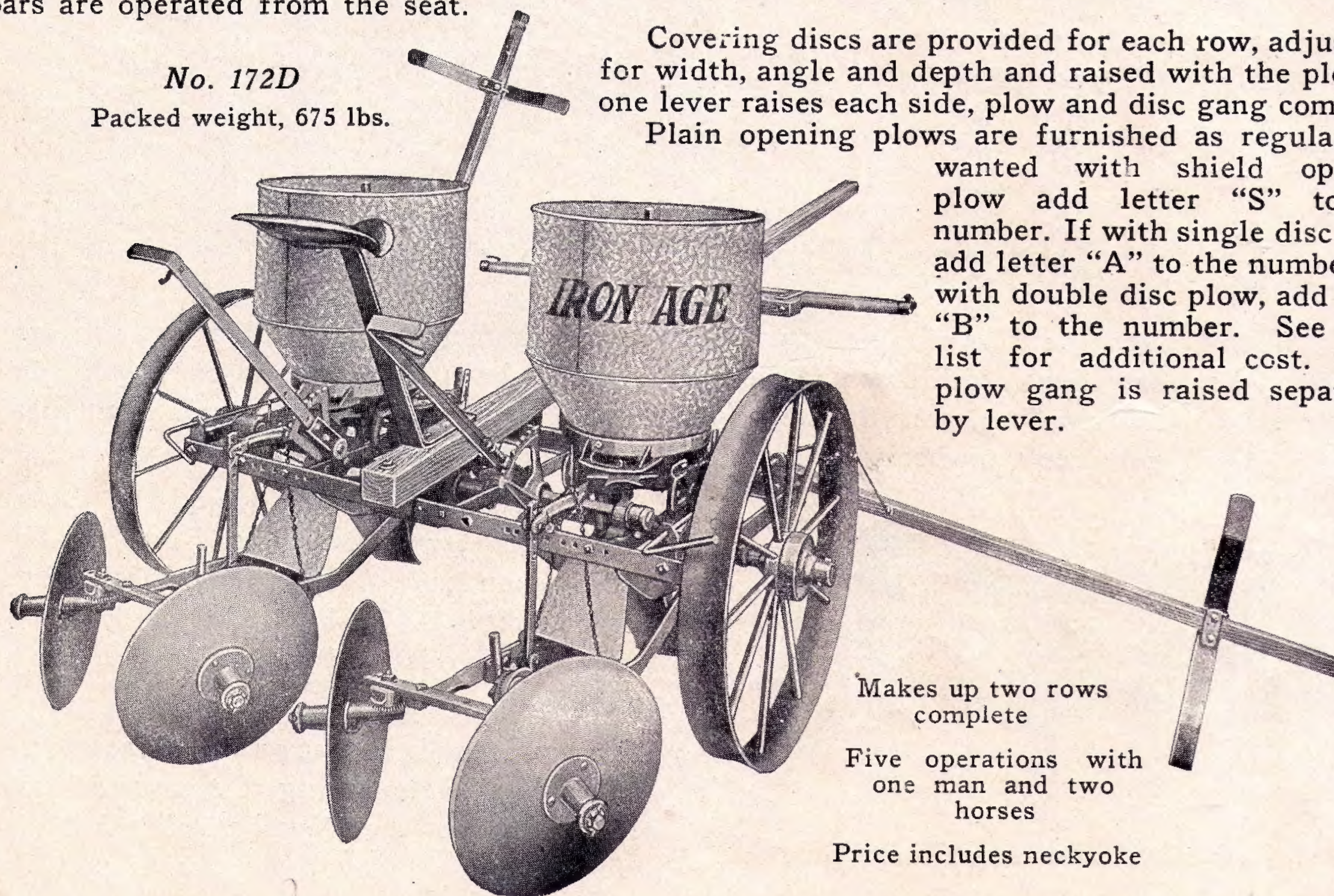
IRON AGE Two-Row Combined Furrower, Fertilizer Distributor and Ridger

THE IRON AGE No. 172D Fertilizer Distributor will open furrows for two rows, 28, 30, 33 or 36 inches apart, distribute fertilizer evenly over the bottom and sides of furrows, in 8 or 10-inch streams, mix fertilizer and soil with a wide tooth for each row, cover and ridge with discs, lightly or as high as desired, this operation also helping to mix the fertilizer and soil and, finally, it marks for the next rows.

Each hopper holds about 200 pounds of fertilizer and has the well-known Iron Age force feed. The hoppers are round and made of galvanized steel. A winged scraper, placed on top of the fertilizer, drops by its own weight as the material feeds from under it (Fig. 530, page 10). The shaft with its steel cross pins revolves the scraper and keeps an open space in the centre. The fertilizer falls light and loose on a cone at the bottom and is forced to the spreader by a feed wheel. The amount you want to sow is adjusted by levers for each hopper separately, but one lever will shut off the flow entirely for both hoppers. You can start the fertilizer flowing with a light kick of the clutch lever. The height of each spreader is adjusted separately by chains. Both hang close to the ground when in use and are raised with the plows to avoid obstructions.

The frame is one piece angle steel. The wheels are 30-inch all-steel with 4-inch rims, ratchet hubs and clutches and a solid $1\frac{1}{4}$ -inch axle. Drives by chain from the center. Improved marker bars are operated from the seat.

No. 172D
Packed weight, 675 lbs.



Covering discs are provided for each row, adjustable for width, angle and depth and raised with the plows—one lever raises each side, plow and disc gang complete. Plain opening plows are furnished as regular. If

wanted with shield opening plow add letter "S" to the number. If with single disc plow, add letter "A" to the number. If with double disc plow, add letter "B" to the number. See price list for additional cost. Each plow gang is raised separately by lever.

Makes up two rows
complete

Five operations with
one man and two
horses

Price includes neckyoke

IRON AGE Combined Furrower, Fertilizer Distributor and Ridger—Continued

NO. 173—The two-row machine is also furnished with two Stirring Tooth Attachments (Fig. 531), in place of the disc gangs and single stirring teeth. Adjustable for depth and fitted with relief spring that saves the teeth when obstructions are struck. The three teeth mix the fertilizer thoroughly with the soil. When complete machine is wanted with this equipment order No. 173.



Fig. 531

Stirring
Tooth Attachment

NO. 172DW—*Wide Frame Machine.*

We also furnish the two-row machine with a wide reinforced frame which is not only for wide rows, 48, 56, 60 or 66 inches apart between some of which you may

want to provide for later plantings, but also for going astride rows of small growth, preparing for second crops. Take for instance, peas, beans, potatoes, etc., planted in wide rows, between which with this machine you can fertilize and make up rows complete, for tomatoes, cantaloupes, etc. In this use of the machine rows can be split so as to make the distance between old and new crops 30 or 33 inches only. When machine is wanted with wide frame and with covering discs same as in No. 172D order as No. 172DW.

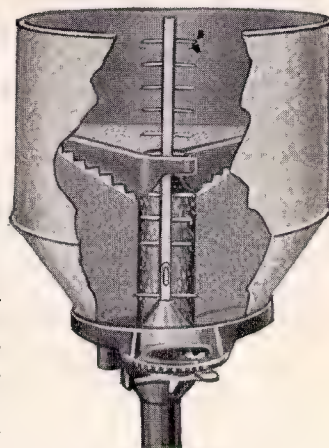


Fig. 530

Sectional view of Fertilizer
Hopper



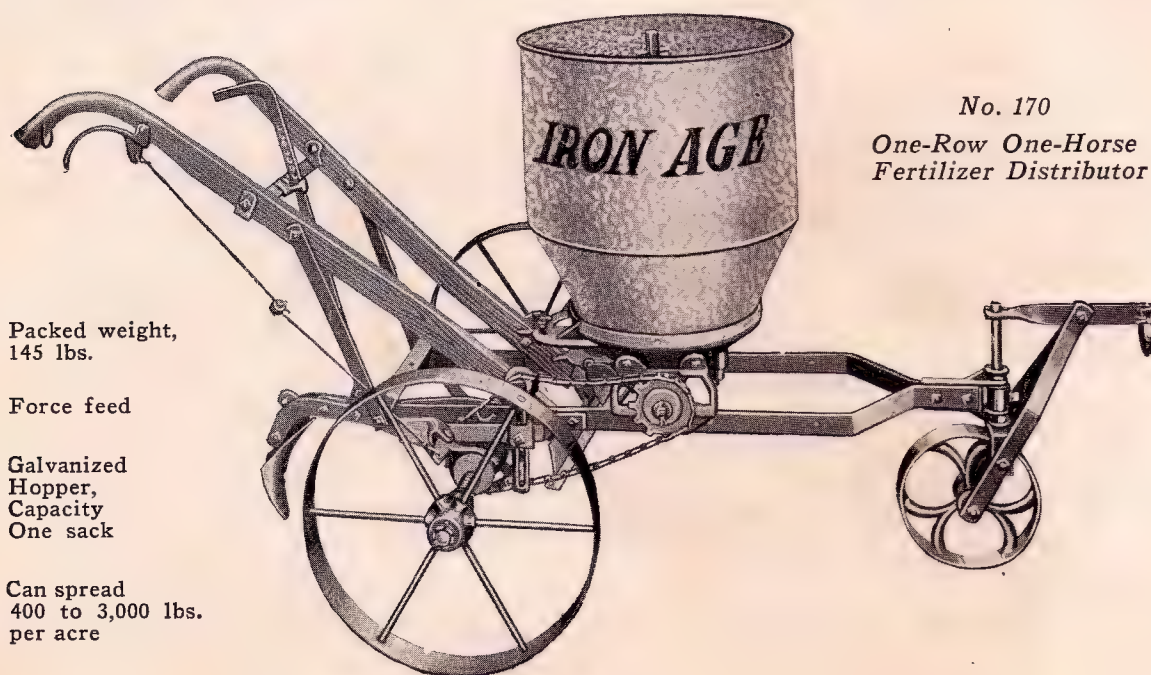
IRON AGE Riding Cultivator equipped with Fertilizer Attachment (See page 14)

IRON AGE One-Row One-Horse Fertilizer Distributors

NO. 170 is the simplest form of the IRON AGE One-Row machine. It is for use where the ground has been prepared and the furrows opened. This machine sows either damp or dry commercial fertilizers in a regular, uniform six or eight-inch stream across the open furrow.

A stirring point in the rear mixes the fertilizer and the soil. A lever with pin adjustment carries the tooth and locks it up out of the way when on the road. The machine can be thrown out of gear while in motion, and locked out with small clip on handle. A swivel wheel is used in front for short, easy turning, and is used for raising or lowering machine to suit depth of furrow. The main wheels are steel with chilled hubs and have a clutch in each.

The galvanized hopper is round, giving a quick, natural feed. The fertilizer falls on a revolving disc, a feed wheel is forced around to the gate opening, and carries the fertilizer into a spout and down the spreader. The capacity of the hopper is a full sack of 167 pounds. A gate regulates the amount to be sown and saves waste when turning at ends of rows. With each machine we send two feed wheels, P-145 to spread 500 to 3000 pounds per acre, and P-145A for spreading lesser amounts. Six, eight and eleven-point chain wheels are furnished also for varying amounts of fertilizer to the acre.



No. 170
*One-Row One-Horse
Fertilizer Distributor*

Packed weight,
145 lbs.

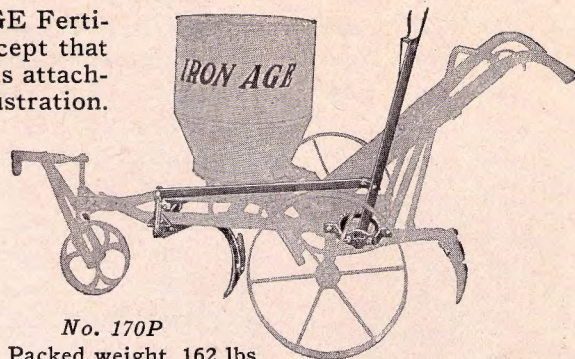
Force feed

Galvanized
Hopper,
Capacity
One sack

Can spread
400 to 3,000 lbs.
per acre

IRON AGE One-Row One-Horse Fertilizer Distributors—Continued

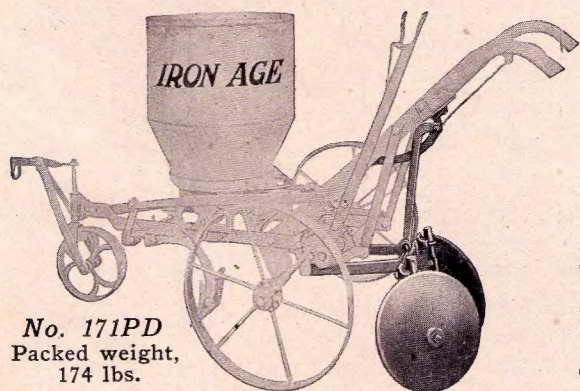
THE No. 170P is similar to the No. 170 IRON AGE Fertilizer Distributor shown on preceding page, except that it is fitted with plow attachment, Fig. 513. This attachment consists of the black parts shown in the illustration. In addition to distributing the fertilizer, this machine opens its own furrow. The plow is adjustable by lever for height.



No. 170P
 Packed weight, 162 lbs.

Fig. 513

Plow attachment for No 170
 When included with the machine order No. 170 P



No. 171PD
 Packed weight,
 174 lbs.

Fig. 514

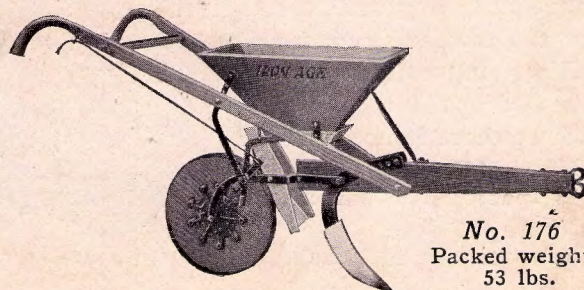
Disc attachment for No. 170
 When included with the machine less stirring
 tooth order No. 171 PD

outfit. If stirring tooth is wanted, order as No. 170PD. Both plow and discs can be obtained separately and applied to the No. 170.

NO. 171PD—This form of the tool not only opens its own furrow and distributes the fertilizer, but covers it thoroughly with 16-inch discs. These discs can be adjusted for angle to regulate amount of soil thrown to the ridge. An eccentric lever, attached to the handles, raises the discs from the ground when turning or when on the road. The illustration shows in black the parts necessary to make No. 170P into No. 171PD. No stirring tooth is furnished with this

No. 176 IRON AGE "Knocker" Fertilizer Distributor

DESIGNED to take care of the great demand for a small one-horse fertilizer distributor that is inexpensive, yet uniform in action, regardless of the condition of the fertilizer. The hopper carries about 45 pounds of commercial fertilizer and is so shaped that the entire load feeds out before reloading is necessary. A large metal-tired wood wheel in rear operates a knocker lever which constantly works the fertilizer down into the spreader. The spreader is partitioned to spread the fertilizer evenly over a width of 7 inches. A shut-off lever conveniently operated from the handle serves to stop the action of the vibrator, stopping the flow of fertilizer when turning at ends of rows or wherever fertilizer is not wanted. The plow-shaped oak handles are strongly braced and adjustable for height. The plow shown in cut is merely to show position of same, and is not supplied. It comes as an extra.



No. 176
 Packed weight
 53 lbs.

IRON AGE Fertilizer Attachments

THE IRON AGE Fertilizer Attachments shown here are used on Iron Age Potato Planters, Cotton Planters, Variety Machines, Row Markers and Duplex Planters. They have been in use for years and have contributed largely to the wonderful success of these machines.

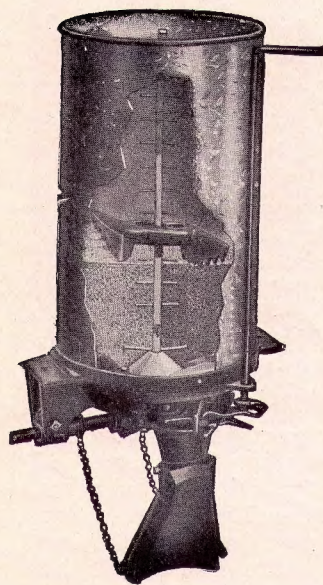


Fig. 458
Regular fertilizer
distributor

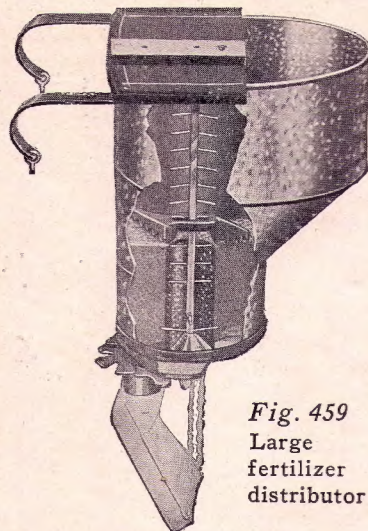


Fig. 459
Large
fertilizer
distributor

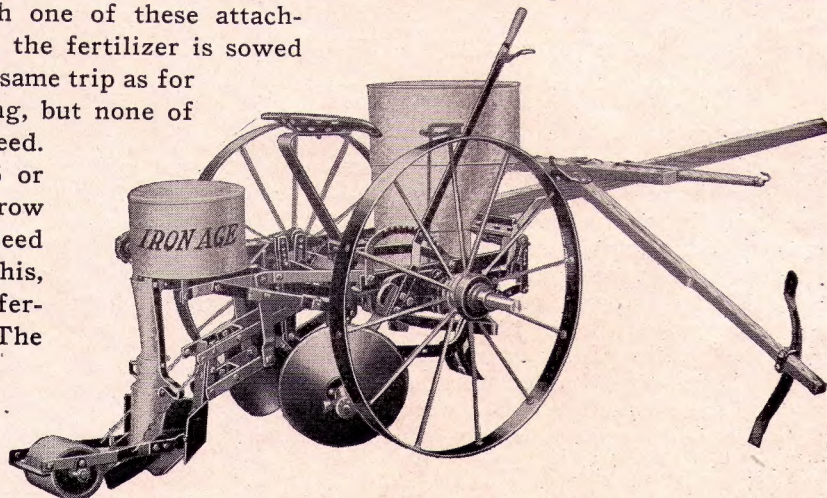
There are two sizes as shown here, both made of heavy galvanized iron and with the same mechanical construction. A winged scraper, placed on top of the fertilizer, drops by its own weight as the material feeds from under it. The shaft with its steel crosspins revolves the scraper and keeps an open space in the center—the fertilizer falls light and loose on the cone and is forced to the spreader by a feed wheel. The amount is regulated from the seat by a lever, saving waste when turning at the ends of rows. Two feed wheels are furnished with every planter—the regular P145A, with round points, and the star-shaped P145. They will sow from 500 to 3000 pounds per acre. To further regulate fertilizer, we provide three extra sprockets and extra chains. The smaller sprockets feed faster.

With one of these attachments, the fertilizer is sowed on the same trip as for planting, but none of

it is allowed to touch the seed. The fertilizer is sowed in a 6 or 8-inch stream across the furrow just back of the plow, and the seed shoe cuts a groove through this, at the same time mixing the fertilizer and soil thoroughly. The seed drops into the groove where there is no fertilizer.

Figure 458—
Capacity, over half a sack.

Figure 459—
Capacity, a full sack.



Fertilizer Attachment on No. 148LD Duplex Planter.

Fertilizer Attachment for No. 68 and No. 78 IRON AGE Riding Cultivators

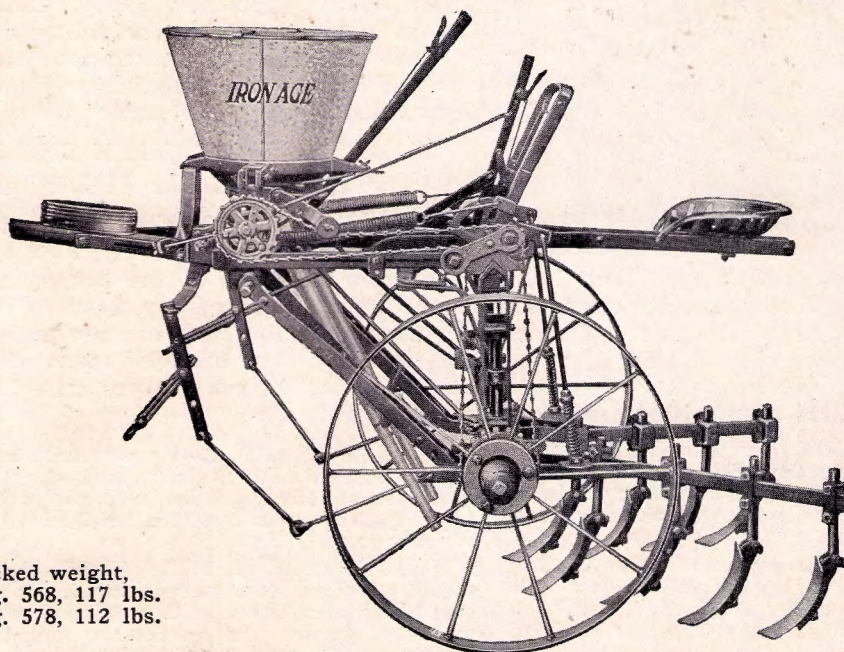


Fig. 578
 Fertilizer Attachment
 for No. 78 Riding
 Cultivator

Fig. 568
 Fertilizer Attachment
 for No. 68 Riding
 Cultivator

Packed weight,
 Fig. 568, 117 lbs.
 Fig. 578, 112 lbs.

A WONDERFUL INVENTION recently added to the "Iron Age" line that marks the greatest advance in scientific cultivation in recent years. Alone, this one remarkable feature raises the "Iron Age" Riding Cultivator head and shoulders above all others because, knowing its value no farmer would be willing to get along without it. With an "Iron Age" Riding Cultivator equipped with this device, lagging crops can be given a boost with nitrate of soda or other similar quick-acting fertilizer at the critical time when quick growth means success or failure. It makes an immense cut in the labor by reducing the number of operations required, it saves money on high-priced fertilizers, and

Combines Cultivation and Fertilization.

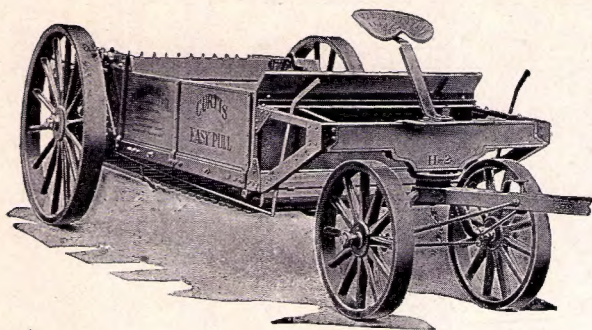
This attachment greatly extends the usefulness of the cultivator, giving it the added ability to do side-dressing and make up fertilized rows.

A No. 68 or No. 78 "Iron Age" Riding Cultivator equipped with this attachment saves distributing all the fertilizer before crops are planted, and avoids special side-dressing operations, as a quick-acting fertilizer can be mixed with the moist soil when the crop is cultivated. With high-priced fertilizers this method is especially desirable, as smaller quantities are required and there is less likelihood of leaching from heavy rains. Masses of fertilizer are not permitted to form and there will be no layers of same under the plants which cannot be stirred up to make plant food available.

By the use of this attachment and a pair of discs, the machine becomes a practical Row Maker, making up and fertilizing rows for such plants as cabbage, peppers, tomatoes, melons, etc.

The hopper holds about 80 pounds of commercial fertilizer or about 50 pounds of cotton seed meal. The feed is practically the same as that used on the "Iron Age" Potato Planter, which has served efficiently and dependably for many years. The feed spouts are adjustable and can be regulated to suit the width of rows.

Curtis "Easy-Pull" Manure Spreader



YOU may have noticed while watching a "level floor type" spreader in operation, that the horses pull just as hard though the load constantly becomes lighter. This is caused by the compact manure crowding against the beater. This difficulty is overcome in the Curtis "Easy-Pull," as this machine, while unloading, draws easier with every step of the team.

THE SPREADER WITH THE HUMP THAT BREAKS THE LOAD

The basic principle that makes the Curtis "Easy-Pull" the lightest draft of all manure spreaders is *the hump in the floor*. This hump is directly in front of the beater, and as the manure on the moving floor comes backward toward the beater, it passes up a gentle incline and breaks on top of this hump. The beater then catches the partly loosened manure and spreads it easily. The beater teeth are not obliged to pull the manure out of the solid mass. In the level floor type of spreader, the pins on the underside of the beater become packers instead of lifters, and pack the lower half of the load against the oncoming manure.

EASY LOADING—The Curtis "Easy-Pull" Manure Spreader is very low—less than 40 inches at the side, and 44 inches at the rear. At the rear end, the jointed end gate and pulverizer is down out of the way when loading.

HIGH WHEELS. *Axle under the Load.* The Curtis "Easy-Pull" is the only high-wheel, low-built spreader with the axle under the load. The large wheels draw much easier than low wheels, regardless of width of tire.

SIMPLEX BEATER DRIVE—This drive transmits power from the main axle to the beater shaft. The feature is patented, and does away with all gears and stud shafts attached to the frame of the spreader. A heavy pintle chain runs over the beater shaft and over the sprocket on the main axle. The direction of the motion of the beater is reversed in a gear case tightly enclosed, attached to the beater itself.

POSITIVE FLOOR FEED—This regulates the exact amount that is to be spread. There is no slipping of the gears, and the spread up-hill and down-hill is the same. The number of loads per acre is regulated by a lever at the driver's seat.

END GATE AND PULVERIZER—When raised the jointed end gate and rake holds itself over the beater at the right angle to pulverize lumps. It is self-adjusting. The end gate holds the manure away from the beater, giving it a free and easy start when the spreader is put into operation.

DOUBLE SPIRAL BEATER—The teeth are arranged in a double spiral, working each way from the center. This distributes the load toward the sides, leaving an even spread on the ground.

CHANGE OF FEED—As regularly equipped, the Curtis "Easy-Pull" has four feeds—5, 10, 15 and 20 loads per acre, changed by lever near driver. Other feeds, both more or less, can be obtained by the use of feed gears.

WIDE SPREAD ATTACHMENT—A special wide spread attachment can be furnished if desired, at extra cost. This attachment will spread the manure outside the wheel tracks. This avoids the compacting of the freshly spread manure by the wheels.

RETURN OR ENDLESS APRON—This spreader is built in endless and return apron models.

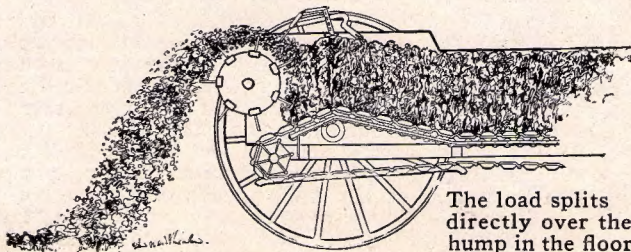
LIST OF SIZES:

Endless Apron:

C-H-1, small two-horse size .. weight	1925 pounds.
C-H-2, medium size	" 1960 "
C-H-3, large size	" 2050 "

Return Apron:

R-H-1, small size	weight 1925 pounds.
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The load splits directly over the hump in the floor